## TOWN OF LOOMIS 3665 Taylor Rd P.O. Box 1330 Loomis, CA 95650

## ENERGY FORM FOR RESIDENTIAL -ROOF ALTERATIONS

[n.			CF-1R-AI	T Prescript	ive Compl	iance		
Site Address:								
Enforcement Agen	Roseville		Climate Zone: 11					
Building Type:   S	ingle Famil	y □ Multi-F	amily		Date	): 		
		OOFING	DDODII	CTS (COO	LDOOF	C) C 151/012		
	exterior roof is, the new ro	surface to be pofing area m	replaced ex ust meet the	ceeds more the roofing produ 1529b)1Hiii.	an 50% of the ct 'Cool Roo	f" requirements of S1	52(в)1Ні, 152(в)	lHii, or
Check applicable alter one of the alternativ	rnative or ex es or excepti	on below is c	hecked, the	Aged Solar Rej	lectance and	l Thermal Emittance	requirements. N requirements for	ote: If any roofing
□ Cool Poofe Not P	amirad in (	products in	S118(i) are i	not applicable	Do not fill 1	able below.	4.1	
☐ Cool Roofs Not Re Alternatives to S152	(b)1Hi and	S152/WIG	Stoon Clos	and 10 with	a Low 5101	bed. Less of 2:12 p	itch.	
☐ Insulation with a t deck over an attic	hermal resi	stance of at	least 0.85 1	ar ft²∘F/Btu	or at least a	¾ inch air-space is	s added to the r	oof
□ Existing ducts in t		ingulated an	d sealed a	ecordina to S	151/Ð10- /	NT'		
☐ In climate zones 1	0. 12 and 1	3 with 1 fl <sup>2</sup>	of free ve	ntilation area	of attic ve	д ntilation for every	150 ft <sup>2</sup> of attic	floor
area, and where a	t least 30 p	ercent of the	free venti	lation area is	within 2 fe	et vertical distance	of the roof rid	TIOOT
□ Building has at lea	st R-30 cei	ling insulati	on; or		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	or volume disamine	of the foot Ha	gc, 01
<ul> <li>Building has radia</li> </ul>	nt barrier in	the attic m	eeting of th	ne requireme	nts of S151	(f)2; or		
☐ Building has no du	acts in the a	ttic; or						
☐ In climate zones 1	0, 11, 13 ar	id 14, R-3 or	r great roof	deck insulat	ion above	vented attic.		
Exception to S152(b	)1Hiii, Lov	v-slope root	f (pitch <u>&lt; 2</u>	2:1 <u>2)</u>				
Building has not d	ucts in attic							
Other Exceptions:		ttoo taa aa	1 1 .	1 1				
□ Roofing area covered by building integrated; photovoltaic panels and solar thermal panels are exempt from the cool roof criteria.								
□ Roof constructions	that have t	harmal maa	o orror tha	og of an our base	na máth at 1	and 2511/02 :		D C
criteria.	пас пасс (	Herman Hias	s over the i	roor memora	ne with at i	east 25tb/tt is exe	mpt from Cool	Roof
I am eligible under I identified on the Cer     I certify that the ener conform to the require     The building design this building design enforcement agency	Division 3 of tificate of Corgy features a rements of T features identified the other a	the Californian ompliance. and performanitie 24, Parts tified on the capplicable con	a Business a nce specifica 1 and 6 of tl Certificate o mpliance for	ations for the late California Compliance	wilding desi Code of Regi are consiste	gn identified on the ( lations, nt with the information	Certificate of Con	apliance
<ul> <li>I certify that this Cer</li> </ul>					d complete.			
Note: If no CRRC-1 l	abel is avai	lable, this co	ompliance	method cann	ot be used	us the Performance	e Approach to	show
compliance, otherwise	, check the	applicable	box if Exe	mpt from the	Roofing P	roducts "Cool Roo	f' Requiremen	t:
CRCC Product ID	Roof		Produc	t Weight	Product		Thermal	SRI <sup>5</sup>
Number	≤2:12	≥2:12	< 5lb/ft <sup>2</sup>	$\geq$ 51b/ft <sup>2</sup>	Type <sup>2</sup>	Reflectance 3,4	Emittance	
1, The CRRC Pr	1. ATD	, , , , , ,	1 10				1	
2. Indicate the 3. If the Aged Re Reflectance vo Where p is the 4. Check box if the	s.org/produce type of prod flectance is alue from the Initial Solat he Aged Refl SRI value by	cts/search.php duct is being in not available es same director Reflectance ectance is a contract of the sectance is a contract of the SR	o used for the in the Cool ory and use calculated w I-Workshee	roof top, ie. si Roof Rating C the equation ( alue using he c t at http://www.	ngle-ply roo ouncil's Ra 0.2 + 0.7 (p equation abo venergy ca	nuncil's Rated Produ of, asphalt roof, metal te Product Directory, initial-02) to obtain ove. gov.title24/ and enter	l roof, etc. , then use the Init a calculated age	ed value.
o apply Liquid Field Ap	plied Coatin	gs, the coatin	g must be a	polied across	he entire ro	of surface and meet the	he dry mil thicks	PRS OF
overage recommended b	y the coating	zs manufactu	er., and me	et the minimu	n performar	ice requirements liste	ed in S118(i)4.	Via VI
elect the applicable coat	ing:							
Aluminum-Pigment	ed Asphalt				nt-Based C	oating   Ot	her	
ame:			Signature	:				
ompany:						Date:	CETIE	
ddress:						If Applicable: □CEA (Certification #):	or acere	
ity:			State			Zip:		
hone:			Licen	se:				

ROOFING PRODUCTS (COOL ROOFS) \$151(f)12  When the area of exterior roof surface to be replaced exceeds 50% of the existing roof area, or 1,000 ft <sup>2</sup> , whichever is less, the new roofing area must meet the roofing product "Cool Roof" requirements of \$152(b)1Hii, 152(b)1Hii, or 152(b)1Hii.  Check applicable alternative or exception below if the roof alteration is exempt from the roofing product "Cool Roof" requirements or \$152(b)1Hii, or 152(b)1Hii.  Cool roofs not required in Climates Zones 1-12, 14, and 16 with a low sloped roof pitch (less or 2:12 pitch).  Cool roofs not required in Climates Zones 1-9, and 16 with a steep-sloped roofs (greater pitch than 2:12) and product weight less than 5/lb/lt <sup>2</sup> . Alternatives to \$152(b)1Hii and \$152(b)Hii, \$15eep-slope roof (pitch >2:12)  Insulation with a thermal resistance of at least 0.85 hr <sup>2</sup> -F/Biu or at least 3.44 inch air-space is added to the roof deck over an attic; or line limited zones 10, 12 and 13, with 11 f2 of free ventilation area is attick or existing ducts in the attic are insulated and sealed according to \$151(f)10; or  Building has at least \$2.00 celling insulation; or  Building has at least \$2.00 celling insulation; or  Building has a readiant barrier in the attic meeting the requirements of \$151(f)(2); or  Building has no ducts in the attic; or  In climate Zones 10, 11, 13 and 14, R-3 or greater roof deck insulation above vented attic.  Exceptions \$152(b)1Hiii, Low-slope roof (pitch \$2:12)\$  Building has no ducts in the attic.  Other Exceptions  Roofing area is covered by building integrated; photovoltaic panels and solar thermal panels are exempt from the Cool Roof criteria.  Roof constructions that have thermal mass over the roof inembrane with at least 25 lb/ft2 are exempt from the Cool Roof criteria.  Roof constructions that have thermal mass over the roof inembrane with at least 25 lb/ft2 are exempt from the Cool Roof criteria.  Roof constructions that have thermal mass over the roof membrane with at least 25 lb/ft2 are exempt from the Cool Roof c	Prescriptive Certificate of Comp		CF-1R-ALT-ReRoof									
When the area of exterior roof surface to be replaced exceeds 59% of the existing roof area, or 1,000 ff, whichever is less, the new roofing area must meet the roofing product "Cool Roof" requirements of \$25(20)1HI, 182(3)1HI, or 182(3)1HIII, or 182(3)1HIIII.   Check applicable alternative or exception below if the roof alteration is exempt from the roofing product "Cool Roof requirements".   Cod roofs not nequired in Climates Zones 1-12, 14, and 16 with a low sloped roof pitch (less or 2.12 pitch).   Cod roofs not nequired in Climates Zones 1-19, and 16 with a steep-sloped roof (greater pitch than 2.12) and product weight less than 5/b/th.   Alternatives to \$152(1)HII and \$152(1)HIII, \$150(1)HII. \$150(					Clir	nate Zone	Permit #					
When the area of exterior roof surface to be replaced exceeds 59% of the existing roof area, or 1,000 ff, whichever is less, the new roofing area must meet the roofing product "Cool Roof" requirements of \$25(20)1HI, 182(3)1HI, or 182(3)1HIII, or 182(3)1HIIII.   Check applicable alternative or exception below if the roof alteration is exempt from the roofing product "Cool Roof requirements".   Cod roofs not nequired in Climates Zones 1-12, 14, and 16 with a low sloped roof pitch (less or 2.12 pitch).   Cod roofs not nequired in Climates Zones 1-19, and 16 with a steep-sloped roof (greater pitch than 2.12) and product weight less than 5/b/th.   Alternatives to \$152(1)HII and \$152(1)HIII, \$150(1)HII. \$150(												
When the area of exterior not surface to be replaced exceeds 50% of the existing roof area, or 1,000 ff, whichever is less, the new noofing area must meet the roofing product "Cool Roof" requirements of \$25(20)1141, 152(3)1141, or 152(3)1141, or 152(3)1411, o												
roofing area must meet the roofing product "Cool Roof" requirements of §152(b)1Hi, 152(b)1Hii, or 152(b)1Hii. Cool roofs not required in Climates Zones 1-12, 14, and 16 with a low sloped roof pitch (less or 2:12 pitch). Cool roofs not required in Climates Zones 1-12, 14, and 16 with a low sloped roof pitch (less or 2:12 pitch). Cool roofs not required in Climates Zones 1-9, and 16 with a steep-sloped roof (pitch   2:12) In sultation with a thermal resistance of at least 0.85 in ft." Ft/Bu or at least a 3/4 inch air-space is added to the roof deck over an attic, or Existing ducts in the attic are insulated and sealed according to §151(f)(10. or Existing ducts in the attic are insulated and sealed according to §151(f)(10. or Existing ducts in the attic are insulated and sealed according to §151(f)(10. or Existing ducts in the attic or in the free ventilation area is within 2 feet vertical distance of the roof indge, or Building has at least R-30 ceiling insulation; or Building has rod ducts in the attic. Or Building has no ducts in the attic. Or Building h	ROOFING PRODUCTS (COOL ROOFS) §151(f)12											
Check applicable alternative or exception below if the roof alteration is exempt from the roofing product 'Cool Roof' required in Climates Zones 1-12, 14, and 16 with a low sloped roof pitch (less or 2:12 pitch).  Cool roofs not required in Climates Zones 1-9, and 16 with a steep-sloped roofs (greater pitch than 2:12) and product weight less than 5/tbnt.  Alternatives to \$152(b)1Hi and \$152(b)Hii, \$teep-slope roof (pitch > 2:12) Insulation with a thermal resistance of at least 0.86 hrt. "Fitch or at least 3.34 inch air-space is added to the roof deck over an attic, or inclimate zones 10, 12 and 13, with 11 20 feet reventiation area as 334 inch air-space is added to the roof deck over an attic, or inclimate zones 10, 12 and 13, with 11 20 feet reventiation area as 434 inch air-space is added to the roof deck over an attic, or inclimate zones 10, 12 and 13, with 11 20 feet vertical distance of the roof ridge; or inclimate zones 10, 11 3 and 13, with 11 20 feet vertical distance of the roof ridge; or inclimate zones 10, 11, 13 and 14, R-3 or greater roof deck insulation above verted attic.  Exception to \$152(b)1Hiii, Low-slope roof (pitch 5 2:12)  Building has no ducts in the attic.  The Cool of the attenuation of the attic, or inclimate zones 10, 11, 13 and 14, R-3 or greater roof deck insulation above verted attic.  Exception to \$152(b)1Hiii, Low-slope roof (pitch 5 2:12)  Building has no ducts in the attic.  The Cool of the attenuation of the attenuati	When the area of exterior roof surface to be replaced exceeds 50% of the existing roof area, or 1,000 ft , whichever is less, the new roofing area must meet the roofing product "Cool Roof" requirements of §152(b)1Hi. 152(b)1Hii, or 152(b)1Hiii.											
Cool roofs not required in Climates Zones 1-12, 14, and 16 with a low sloped mof pitch (less or 2-12 pitch) Cool roofs not required in Climates Zones 1-9, and 16 with a steep-sloped roofs (greater pitch than 2-12) and product weight less than 5/fb/ft². Alternatives to \$552(b)+11 and \$152(b)+11, Steep-slope roof (pitch > 2.172) Insulation with a thermal resistance of at least 0.85 fm². "Fibit or at least a 3/4 inch air-space is added to the roof deck over an attic; or Existing ducks in the attic are insulated and sealed according to \$151(f)t0. or In climate zones 10, 12 and 13, with 1 ft2 of free ventilation area of attic ventilation for every 150 ft2 of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertilation for every 150 ft2 of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertilation for every 150 ft2 of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertilation for every 150 ft2 of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertilation of the roof ridge, or Building has at least R-30 ceiling insulation; or Building has rediant barrier in the attic meeting the requirements of \$151(f)2; or Building has no ducts in the attic.  Coffer Exception to \$152(b)+fl11, Low-slope roof (pitch \$2.12) Building has no ducts in the attic.  Coffer Exceptions Coffer proof floor area is covered by building integrated; photovoltatic panels and solar thermal panels are exempt from the Cool Roof criteria.  NOTE: If any one of the alternatives or exception is sheeked the Aged Solar Reflectance and Thermal Emittance requirements for roofing products in \$118(i) are not applicable. Do not fill table below.  CRRC Product ID Number:  Roof Solaries are Solaries and Solaries are such as a solar thermal panels are exempt from the Cool Roof criteria.  Note: If no CRRC-1 label is available, this compliance method cannot be used, use the Performance	Check applicable alternative or exception below if the roof alteration is exempt from the roofing product "Cool Roof" requirements:											
Roof Slope	Cool roofs not required in Climates Zones 1-9, and 16 with a steep-sloped roofs (greater pitch than 2:12) and product weight less than 5/ib/it*.  Alternatives to §152(b)1Hi and §152(b)Hii, Steep-slope roof (pitch > 2:12)  Insulation with a thermal resistance of at least 0.85 hr·ft².ºF/Btu or at least a 3/4 inch air-space is added to the roof deck over an attic; or  Existing ducts in the attic are insulated and sealed according to §151(f)10; or  In climate zones 10, 12 and 13, with 1 ft2 of free ventilation area of attic ventilation for every 150 ft2 of attic floor area, and where at least 30 percent of the free ventilation area is within 2 feet vertical distance of the roof ridge; or  Building has at least R-30 ceiling insulation; or  Building has radiant barrier in the attic meeting the requirements of §151(f)2; or  Building has no ducts in the attic; or  In climate zones 10, 11, 13 and 14, R-3 or greater roof deck insulation above vented attic.  Exception to §152(b)1Hiii, Low-slope roof ( pitch ≤ 2:12)  Building has no ducts in the attic.  Other Exceptions  Roofing area is covered by building integrated; photovoltaic panels and solar thermal panels are exempt from the Cool Roof criteria.  Roof constructions that have thermal mass over the roof membrane with at least 25 lb/ft2 are exempt from the Cool Roof criteria.											
CRRC Product ID Number¹	products in §118(i) are not applicable. Do n			(14)	Burling	Agod Solar	Thormal					
Note: If no CRRC-1 label is available, this compliance method cannot be used, use the Performance Approach to show compliance,  1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at <a href="https://www.coolroofs.org/products/search.php">www.coolroofs.org/products/search.php</a> 2. Indicate the type of product is being used for the roof top, i.e. single-ply roof, asphalt roof, metal roof, etc. 3. If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation (0.2+0.7(p <sub>pillar</sub> – 0.2) to obtain a calculated aged value. Where p is the Initial Solar Reflectance.  4. Check box if the Aged Reflectance is a calculated value using the equation above. 5. Calculate the SRI value by using the SRI. Worksheet at <a href="http://www.energy.ca.gov/title24/">http://www.energy.ca.gov/title24/</a> and enter the resulting value in the SRI Column above and attach acopy of the SRI- Worksheet to the CF-1R.  To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §118(i)4. Select the applicable coating:    Aluminum-Pigmented Asphalt Roof Coating	CRRC Product ID Number <sup>1</sup>	≤ 2:12 > 2:	12 < 5lb/ft	$^2 \geq 5 \text{lb/ft}^2$	Type <sup>2</sup>	Reflectance <sup>3,4</sup>		SRI <sup>5</sup>				
Note: If no CRRC-1 label is available, this compliance method cannot be used, use the Performance Approach to show compliance,  1. The CRRC Product ID Number can be obtained from the Cool Roof Rating Council's Rated Product Directory at <a href="www.coolroofs.org/products/search.php">www.coolroofs.org/products/search.php</a> 2. Indicate the type of product is being used for the roof top, i.e. single-ply roof, asphalt roof, metal roof, etc. 3. If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation (0.2+0.7(pmiss - 0.2) to obtain a calculated aged value. Where p is the Initial Solar Reflectance. 4. Check box if the Aged Reflectance is a calculated value using the equation above. 5. Calculate the SRI value by using the SRI-Worksheet at <a href="http://www.energy.ca.gov/title24/">http://www.energy.ca.gov/title24/</a> and enter the resulting value in the SRI Column above and attach acopy of the SRI-Worksheet to the CF-1R. To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §118(i)4. Select the applicable coating:    Aluminum-Pigmented Asphalt Roof Coating				- 3								
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NOTE: When a Cool Roof is required, the installing contractor shall complete and submit the CF-6R-ENV-01 for final inspection.  Declaration Statement  I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is accurate and complete.  I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.  Name:  Signature:  Date:  Address:  License:	<ol> <li>Indicate the type of product is being used for the roof top, i.e. single-ply roof, asphalt roof, metal roof, etc.</li> <li>If the Aged Reflectance is not available in the Cool Roof Rating Council's Rated Product Directory then use the Initial Reflectance value from the same directory and use the equation (0.2+0.7(ρ<sub>initial</sub> – 0.2) to obtain a calculated aged value. Where ρ is the Initial Solar Reflectance.</li> <li>Check box if the Aged Reflectance is a calculated value using the equation above.</li> <li>Calculate the SRI value by using the SRI- Worksheet at <a href="http://www.energy.ca.gov/title24/">http://www.energy.ca.gov/title24/</a> and enter the resulting value in the SRI Column above and attach acopy of the SRI- Worksheet to the CF-1R.</li> <li>To apply Liquid Field Applied Coatings, the coating must be applied across the entire roof surface and meet the dry mil thickness or coverage recommended by the coatings manufacturer and meet minimum performance requirements listed in §118(i)4. Select the applicable coating:</li> </ol>											
Declaration Statement         ● I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is accurate and complete.         ● I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.         Name:       Signature:         Company:       Date:         Address:       License:		0					inal inspection.					
I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is accurate and complete.      I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.  Name:    Signature:		mstanniy contra	icioi silali coll	pioto and st	minit the OF	014-E114-01 (O) (	mai mopoddom					
Address: License:	<ul> <li>I certify under penalty of perjury, under the laws of the State of California, the information provided on this form is accurate and complete.</li> <li>I certify that the energy features and performance specifications identified on this Certificate of Compliance conform to the requirements of Title 24, Parts 1 and 6 of the California Code of Regulations.</li> </ul>											
	Company:				D	ate:						
City/State/Zip: Phone:	Address:	ddress: License:										
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